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April 9, 1996

96-RM-TA-0081-KH

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RCRA STATUS OF INTERCEPTOR TRENCH SYSTEM WATER - CCJ-103-96

Action: None required - information only

Per your request, RMRS has conducted a RCRA regulatory analysis of the water collected in the Interceptor Trench System (ITS). The purpose of this analysis is to support the objectives of the ITS Water Management Proposal. A historical review of the events associated with this media, as well as application of the "contained-in" policy and determination of risk, indicate that the ITS water poses no significant risk to human health and the environment and should not be managed as hazardous waste. Considerable documentation exists to support this conclusion. A brief discussion of the decision process supported by Enclosures 1 through 7 is presented below.

Background:
Groundwater is collected in the ITS located north of the Solar Evaporation Ponds. The water from the ITS was originally collected in an underground concrete tank and then was pumped to the Solar Evaporation Ponds to help prevent migration of contaminants. To facilitate emptying and closure of the ponds, the ITS water was diverted from the underground tank to three above-ground storage tanks. The solutions in these tanks were evaporated at the Site's waste water treatment facilities in Buildings 374 and 910.

Regulatory approval for this form of groundwater treatment was obtained through an Interim Measure/Interim Remedial Action (IM/IRA) Document and concurrent modification to the Site's Part B Permit on May 30, 1992 (Enclosure 1). By letter dated September 2, 1992 (Enclosure 2), the Colorado Department of Public Health and the Environment (CDPHE) requested that the new tank system be included in the Site's Part A Application. The revised Part A was submitted to CDPHE on November 6, 1992. The affected page from the Part A Application is shown in Enclosure 3.

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Determination of RCRA Status of Groundwater Collected in the ITS:
Groundwater collected in the ITS does not contain hazardous waste based on the following logic:

a. Even though groundwater itself is not a solid waste and therefore cannot be characterized as a hazardous waste (6 CCR 1007-3, Part 261), it nevertheless may require management as a hazardous waste if it indeed contains hazardous waste. Enclosure 4 reflects CDPHE's policy for determining whether or not environmental media such as groundwater contains hazardous waste based on their "contained-in" policy.

b. Using CDPHE's "contained-in" policy as shown in Enclosure 4, a risk assessment (Enclosure 5) was performed on each hazardous waste and hazardous constituent that could be found in the ITS water. The hazardous wastes and hazardous constituents included cyanide, arsenic, barium, beryllium, cadmium, chromium, lead, nickel, selenium, silver, mercury, carbon tetrachloride, methylene chloride, toluene, trichloroethene, trichloroethane, butanone, benzene, and tetrachloroethene.

(Please note that nitrates were specifically not included on the list of hazardous wastes or hazardous constituents for purposes of the risk assessment because they are not hazardous wastes as defined in Part 261, Subparts C and D, and they are not hazardous constituents as listed in Part 261, Appendix VIII. However, this is a moot point because the planned management of the ITS water will ensure that the nitrates will not present a risk to human health and the environment. Under the planned management strategy, ITS water will be combined with other discharges in such a manner that the concentration of nitrates in the combined discharge will meet Colorado Water Quality Control Commission Stream Standards.)

c. The results from applying CDPHE's risk assessment methodology showed that carbon tetrachloride was the only hazardous waste and/or constituent contained in the ITS water under CDPHE's "contained-in" policy. This constituent was detected at 1 ppb. The carbon tetrachloride is most likely originating from the Industrial Area Groundwater Contamination Plume which is physically separate from the Solar Evaporation Ponds. This source of contamination will be addressed in accordance with the Conceptual Plan for the Management and Remediation of Groundwater at Rocky Flats Environmental Technology Site. However, it is our belief that the carbon tetrachloride in the ITS water is not a significant risk to human health and the environment, based on the following:

1. The concentration of carbon tetrachloride in the ITS collection tank is below the Federal Safe Drinking Water Act maximum contaminant level (MCL) of 5 ppb. This standard is shown in Enclosure 6.

2. EPA's recently proposed Hazardous Waste Identification Rule states that carbon tetrachloride concentrations below 12 ppb represent a risk to human health of less than or equal to $1x10^{-6}$. This proposed standard is shown in Enclosure 7.

d. The intent of CDPHE's "contained-in" policy (as discussed in Enclosure 4) is to require regulation of environmental media such as groundwater whenever it contains hazardous waste that represents a significant risk to human health and the environment. Because the carbon tetrachloride contained in the ITS water does not represent a significant risk, the water does not require management as hazardous waste.

We are pleased to provide this regulatory support. If you have any questions or require additional information, please contact Kirk Ticknor at extension 6344.

Candice C. Jierree, Vice President
Technical Assurance, RMRS

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Enclosures
As Stated:

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